CoV PCR analysis. His condition deteriorated in ward with worsening respiratory failure. CTPA was done to rule out pulmonary embolism, which showed no pulmonary embolism but bilateral gross consolidation, more on the right, in keeping with an infective process. Antibiotics were changed to intravenous Ceftriaxone and Azithromycin; however, there was continuous deterioration and patient succumbed to his illness on day 4 of admission. His throat swab was later traced back to be positive for MERS-CoV, while his sputum was negative for bacterial cultures.

PS 2-334

INFLUENZA A (H1N1) PNEUMONIA WITH ACUTE RESPIRATORY DISTRESS SYNDROME (ARDS) AND RHABDOMYOLYSIS WITH ACUTE RENAL FAILURE: A CASE REPORT

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Purpose: It is generally noted that patients with pneumonia from pandemic H1N1 may have abnormal laboratory examination results, including elevated creatine kinase (CK) levels in the previous literatures. We herein report a similar case complicated with ARDS and rhabdomyolysis.
Case report
This 36-year-old woman was admitted to our emergent room with fever for 2 days. She was transferred to the ICU due to influenza A pneumonia with ARDS and profound hypoxemia. Immediate endotracheal intubation was done and Nitrogen oxide (NO) was used for profound hypoxemia. Prone position ventilation was not attempted due to morbid obesity. Antibiotic therapy with Tazozin, Cravit and Tamiflu was used. Dopamine was prescribed due to refractory shock post resuscitation. However, no significant bacterial culture result was obtained, except a positive PCR for Influenza A (H1N1). The PaO2/FiO2 ratio remained $<$ 200 mmHg, requiring the use of high PEEP, fully sedation and muscle relaxant to maintain the oxygenation. However, fever and shock persisted, hence, Cravit was shifted to Tygacil. The subsequent follow-up blood culture was negative. Poor oxygenation hindered her from the study of Computed Tomography. Oliguria with tea-colored urine was noted. Marked elevation of CK total [7601 IU/L] and myoglobin [32890 mg/dL] were noted. Rhabdomyolysis with acute renal failure was impressed, which was probably related to H1N1 infection. After the treatment, the condition was still worsening. Due to unstable blood pressure and severe metabolic acidosis with oliguria, continuous veno-veno hemofiltration (CVVH) was commenced. Then the patient finally expired due to progressive condition.
Conclusions: Although pneumonia and ARDS are the most common severe complications of H1N1 infection. Rhabdomyolysis should be considered in the evaluation of muscle symptoms associated with Influenza A (H1N1) Pneumonia, especially in critically ill patients. Timely extra-corporeal membrane oxygenation may be helpful to survive the patients with life-threatening Influenza infection.

PS 2-335

URINARY TRACT INFECTION CAUSED BY *MYROIDES* SPECIES: A CASE REPORT

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Purpose: *Myroides* species are widely distributed in nature, but clinical human infections by these organisms are extremely rare. We report herein prolonged outbreak of urinary tract infection by Myroides species.
Case report
A 63-year-old male of *end stage renal disease,* rheumatoid arthritis, destroyed lung post operation, post tracheostomy suffered from consciousness change and much sputum for five days. He was brought to emergency department on November 17, 2014. Laboratory data shows leukocytosis (WBC: 13,300/μL); bandemia (band: 5%); and C-reactive protein, 113 mg/L. CXR showed almost whiteout of the right side destroyed lung with residual alveolar, surgical clips and suture stitches left. Ceftazidime was given. Brain CT showed mild communicating hydrocephalus and mixed acute and old lacunar infarcts. He was admitted to intensive care unit (ICU). Emergent ventilator support was used due to dyspnea and respiratory failure. Fever happened. Sputum culture showed *Pseudomonas aeruginosa* and carbapenem-resistant *Acinetobacter baumannii*. Urine culture showed *Myroides* species, susceptible to imipenem and piperacillin/tazobactum, but resistant to ceftazidime and ciprofloxacin. Antibiotic was shifted to ceftazidime and colistin. The patient condition improved gradually under medical treatment and started weaning trial, but ABG showed CO2 retention. Owing to ventilation dependence and improved condition, he was transferred to the RCW for long-term care on November 27, 2014.
Conclusion
Serious and prolonged nosocomial outbreaks of urinary tract infections caused by *M. odoratimimus* have been reported. Because multiresistance was generally found in Myroides spp., empirical therapy was usually ineffective. We report a nosocomial urinary tract infection by *Myroides* spp.

PS 2-336

BETADINE® SOLUTION, BETADINE® SKIN CLEANSER, BETADINE® SURGICAL SCRUB, AND BETASEPTIC® DEMONSTRATED EXCELLENT VIRUCIDAL IN-VITRO EFFICACY AGAINST EBOLA VIRUS ZAIRE AND MODIFIED VACCINIA VIRUS ANKARA

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Purpose: The current Ebola virus (EBOV) epidemic highlights the need for efficacious virucidal products. In Europe, EN 14476:2013/A1:2014 describes the standard for determining virucidal activity. For the claim 'virucidal active against enveloped viruses for hygienic handrub and handwash' the Modified vaccinia virus Ankara (MVA) was introduced as reference virus in 2014. In the case of deadly EBOV, which is also an enveloped virus, the activity needs to be proven.
The first aim of this study was to test the in-vitro efficacy of four povidone iodine (PVPI) formulations containing 4% (BETADINE® Skin Cleanser), 7.5% (BETADINE® Surgical Scrub), 10% (BETADINE® Solution) PVPI and 3.2% PVPI and 78% alcohol (BETASEPTIC®). The second aim was to verify the claimed concentration-contact-time values with EBOV.
Methods: In accordance with EN 14476 a standard suspension test was used for testing against MVA and large-volume plating technology for testing against EBOV to increase test sensitivity and to exclude potential after-effects. All products were tested under clean (0.3 g/l BSA) and dirty conditions (3.0 g/l BSA + 3.0 ml/l erythrocytes) as interfering substance with an application time of 15, 30, and 60 seconds for MVA and 15 seconds for EBOV. The products were tested undiluted, 1:10 and 1:100 diluted against MVA and 1:10 diluted against EBOV.
Results: Viral titres of MVA and EBOV were reduced by $>$99.99% to $>$99.999% under clean and dirty conditions with 15 seconds application.
Conclusions: All products showed excellent virucidal efficacy against EBOV demonstrating the important role PVPI can play in the prevention and limiting the spread of the Ebola disease. The proven efficacy against both test viruses with 15 seconds application time is helpful information for implementation of appropriate guidance to people exposed to EBOV and confirms excellent virucidal efficacy of PVPI against enveloped viruses.
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PS 2-337

CYTOMEGALOVIRUS VIREMIA IN PATIENTS WHO WERE INFECTED WITH HUMAN IMMUNODEFICIENCY VIRUS

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Introduction: At the end of 2014, there were more than 28,000 reported HIV-infected patients in Taiwan. Cytomegalovirus (CMV) infection, secondary to *Pneumocystis jeroveci* pneumonia and candidiasis, is the 3rd common opportunistic infections in HIV-infected persons. This study aimed to explore the relationships between CMV DNA quantitation and the severity of immune compromised states among HIV patients.
Methods: Real time polymerase chain reaction (RT-PCR) was applied to detect CMV DNA using COBAS AmpliPrep/COBAS TaqMan CMV assay (Roche

Diagnotics, Indianapolis, IN, USA). The correlations with HIV viral loads and CD4+ T-cell counts were further analyzed.
Results: Totally 291 HIV-infected cases were enrolled. Their mean ages were 35.9 (standard deviation; 9.4) years, male : female ratio ; 254 (87.3%) : 37(12.7%). Among them, 98.8% (168/170) showed CMV IgG positivity. Ninety-five patients (32.6%) had CD4+T cell count >=500 cells/uL; 156 patients (53.6%), >=200 - <500cells/uL; and 40 patients (13.7%), <200cells/uL. In addition, 23 (7.9%) patients had HIV viral load >=100,000 copies/ml; 98 patients (33.7%), >=400 - <100,000; 50 patients (17.1%), >=20 - <400; and 120 patients (41.2%), < 20 copies/ml. Among them, 268 cases (92.1%) had negative CMV DNA detection, 16 cases (5.5%) had detectable CMV DNA (<150 copies/mL), and 7 cases (2.4%) had CMV DNA>150 copies/ml. Patients who had CD4+ T cell counts<200 cells/uL have 5 times of odds ratio to develop CMV viremia, compared to subjects who have CD4+ T cell counts > 500 cells/uL. Patients who had HIV viral load >100,000 copies/ml have 129 times of odds ratio to develop CMV viremia, compared to subjects who have HIV viral load <20 copies/ml.
Conclusion: Early initiation of highly active antiretroviral therapy would prompt the recovery of immune deficiency, and certainly alleviate the burden of CMV viremia.

PS 2-338

CLINICAL EXPERIENCES IN INTERPRETATION OF HIV-1 WESTERN BLOT INDETERMINATE RESULTS

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Purpose: According to the guidelines published by Taiwan Centers for Disease Control, status of HIV infection has to be confirmed by a positive Western blot (WB) results after the HIV-1/2 antibody screening assay. However, the interpretation of WB results might vary according to the package inserts of the commercial manufacturers, which might cause disagreement between different clinical laboratories.
Methods: The clinical outcomes of 1712 patients whose specimens were sent for HIV WB tests between May 2006 and April 2012 were analyzed. The BIO-RAD NEW LAV BLOT I, II was used by the Virology laboratory of the National Taiwan University Hospital.
Results: Between the study period, a total of 1712 HIV WB-I tests were performed, which include 1015 positive, 285 indeterminate, and 412 negative results. For those who are determined as HIV WB-I positive, they are sero-positive for GP160 (N=1,014), GP110/120 (N=995), P68/66 (N=973), P55 (N=885), P52/51 (N=941), GP41 (N=945), P40 (N=602), P34/31 (N=902), P24/25 (N=937), and P18/17 (N=679). For the indeterminate HIV WB-I, four patterns are most common and they are P24/25 (N=46), P18/17 (N=26), GP160 + P55 + P24/25 (N=22), and P55 (N=22). Among the 22 patients reactive with GP160 + P55 + P24/25, 20(91%) are confirmed with HIV infection status and two were lost of follow-up.
For HIV WB-II, among the 228 tests, none was positive. 98 are indeterminate and 130 are negative. Most of the indeterminate HIV WB-II are sero-positive with P26(N=57). None of them are confirmed with HIV-2 infection at the end of the study period.
Conclusions: Based on the study results, for those who have indeterminate WB results, two or more interpretation criteria are suggested to help interpretation, such WHO CRITERIA: 2ENV ± GAG ± POL and US CENTER FOR DISEASE CONTROL CRITERIA: ENV + P24 / 25.

PS 2-339

HIV-1 CRF08_BC MUTANTS RESISTANT TO REVERSE TRANSCRIPTASE INHIBITORS

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Purpose: Human immunodeficiency virus type (HIV)-1 circulating recombinant form 08_BC (CRF08_BC), carrying recombinant reverse transcriptase (RT) gene from subtype B and C, has recently become highly prevalent in Southern China. As the number of patients infected by CRF08_BC increases, it is important to characterize the drug resistance mutations of CRF08_BC, especially against widely used antiretrovirals.
Methods: In this study, clinically isolated virus was propagated in human peripheral blood mononuclear cells (PBMCs) with increasing concentrations of nevirapine (NVP), efavirenz (EFV) or lamivudine (3TC).
Results: Three different resistance patterns led by initial mutations of Y181C, E138G and Y188C were detected after *in vitro* selection with NVP. Virus variants with initial mutations, in combination with three other previously reported substitutions (K20R, D67N, V90I, K101R/E, V106I/A, V108I, F116L, E138R, A139V, V189I, G190A, D218E, E203K, H221Y, F227L, N348I and T369I) or novel mutations (V8I, S134N, C162Y, L228I, Y232H, E396G and D404N) developed during NVP selection. EFV-associated variations contained two initial mutations (L100I and Y188C) and three other mutations (V106L, F116Y and T139V). Phenotypic analyses showed that E138R, Y181C and G190A contributed high level resistance to NVP, while L100I and V106L significantly reduce virus susceptibility to EFV. Y188C resulted in a 20-fold reduction of susceptibility to both NVP and EFV. M184V was selected by 3TC as expected. This mutation, alone or with V90I or D67N, decreased 3TC susceptibility by over 1000 folds.
Conclusion: These results have brought new insight into the development of drug-related mutations in patients and provided useful information for the optimization of antiretroviral regimens.

PS 2-340

PEGYLATED INTERFERON/RIBAVIRIN TREATMENT HIGHLY EFFECTIVE IN HIV/HCV-COINFECTED MEN WHO HAVE SEX WITH MEN IN TAIWAN: SINGLE MEDICAL CENTER EXPERIENCE

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Purpose: A recent outbreak of HCV infection has been identified among HIV-infected men who have sex with men (MSM) worldwide, including Taiwan since 2006. Pegylated interferon (PEG-IFN) with ribavirin (RBV) remains standard of treatment in most Asian countries. However, very few studies have evaluated the treatment efficacy in such particular population.
Methods: We conducted a single-centered, retrospective cohort study of HIV-1 infected patients in Northern Taiwan from 2006 to 2014. Persistent HCV infection was diagnosed with positive anti-HCV serology and a detectable HCV viral load. Clinical characteristics, HIV-1 infection status, use of antiretroviral therapy (ART), HCV genotypes, and IL-28B genotypes were collected at baseline, during PEG-IFN plus RBV treatment, and at follow-up.
Results: Fifty-four patients had persistent HCV infection, of whom 43 were MSM. They were significantly younger and received ART with an undetectable HIV-1 viremia more often than the other cohort (Table). Thirty-four MSM were eligible for treatment and had a very high sustained virological response (SVR) rate regardless of HCV genotypes (80.0% [4/5] for GT 1, 100.0% [7/7] for non-GT 1, $p = .417$). Skin manifestations (local injection reaction and alopecia), anemia, and depression were the most frequent adverse effects.

Table Demographic Features and Treatment Outcome

Characteristics	MSM (N=43)	IDU and others (N=11)	P value
Age (years)			
Median [IQR]	34 (30–40)	43 (41–51)	.011
Ongoing ART			
Any	41 (95.3%)	5 (45.5%)	< .001
Last HIV-1 RNA (copies/mL)			
<40	32/40 (80.0%)	4/11 (36.4%)	.009
HCV Genotype			
GT1	11/31 (35.5%)	7/10 (70.0%)	.075
GT2	18/31 (58.1%)	2/10 (20.0%)	.067
GT6	0/31 (0.0%)	1/10 (10.0%)	.244
Treatment Outcome			
RVR	17/26 (65.4%)	3/6 (50.0%)	.647
EVR	21/21 (100.0%)	5/5 (100.0%)	NA
SVR	18/19 (94.7%)	0/1 (0.0%)	.100